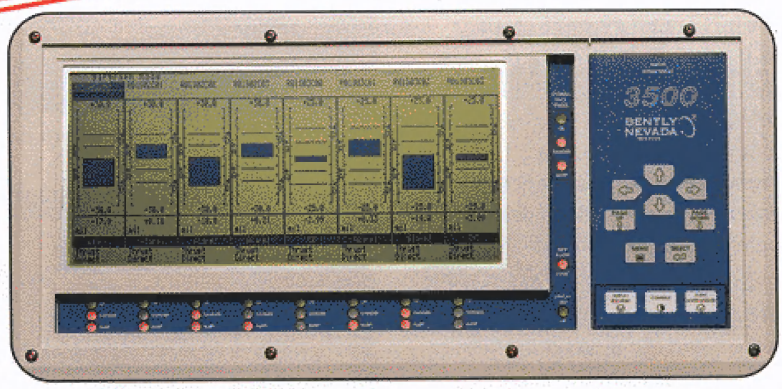
New Product

The 3500/93 System Display



by Shawn Williams
Marketing Engineer
Bently Nevada Corporation

Our new 3500/93 System Display provides a dedicated, local display of machinery data and system information for your 3500 Monitoring System. It is a versatile, user-friendly, and reliable display for a single 3500 Monitoring System rack.

Until now, there were only three ways to display 3500 System information, and all were remote from the rack: on a computer interfaced through an RS232/422 serial link, on a Distributed Control System via a Modbus® interface, or on a third party Modbus display. Now you can have a dedicated display at the rack, or up to 1220 metres (4000 feet) away.

Versatile

The 3500/93 System Display consists of three components: the Display Unit, a Display Interface Module, and the Display Interface I/O Module. The 3500/93 System Display has four different mounting options: system face mount, rack mount, panel mount, and independent mount.

The Display Interface Module, which occupies a full-height slot in the rack, collects the data from the 3500 rack and transmits it to the Display Unit. It also interprets commands from the display keypad.

The I/O Module, installed at the back of the rack, provides a rear cable connection for the display, which is used for most mounting options.

The system face mount option allows the 3500 System Display to be mounted directly to the face of the 3500 Monitoring System, eliminating the need for additional panel or rack space. This is the least expensive option and requires the fewest components. When mounted in this configuration, the display can be rotated away from the front of the 3500 System, allowing access to the front panel connectors. In this position, the display can still be easily read.

The independent mount option provides an independent, stainless steel enclosure which can be mounted virtually anywhere. Maximum mounting distance of the Display from the 3500 Monitoring System rack is 1220 metres (4000 feet). The Display housing is constructed in accordance with NEMA 4 guidelines and has Class 1, Division 2, Groups A, B, C and D Hazardous Area Approvals, as well as the CE mark.

User-friendly

The user interface to the Display Unit is via a sealed Tactile Membrane Keypad. You can scroll through channels in the 3500 rack, eight at a time when in bar graph mode or 16 at a time in text mode. Customized screens, which allow you to display specific sets of channels, can be developed in the 3500 configuration software. For example, if you have two machine trains in one 3500 rack, all the Machine 1 measurements could be configured

to appear on one screen, and Machine 2 measurements could appear on a second screen. Data from both machines could then be viewed by switching between the two screens.

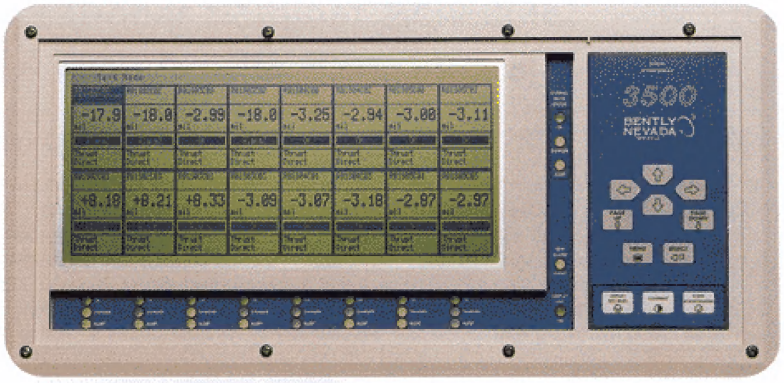
Programming the System Display is easily accomplished using the 3500 Configuration Software. The display information can be customized, based on your existing rack configuration, and then downloaded to the Display Interface Module for that rack.

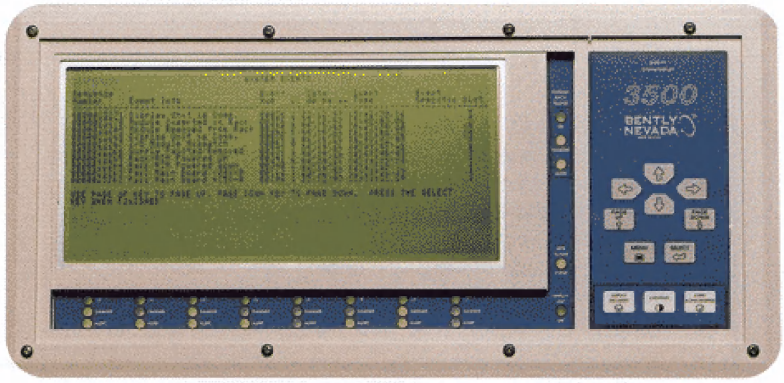
The Display screen consists of a high contrast Liquid Crystal Display with a resolution of 600 W x 200 H pixels, which provides crisp text and bar graph images. The large viewing area and a contrast adjustment feature enable you to easily view the numeric readouts, bar graphs, and text.

The screen can display up to 16 channels of data in text mode or 8 channels in bar graph mode. If the display is connected to a high density rack (up to 48 channels), a scan mode can be selected to scan through display screens at an update rate you choose.

The real value of the display is in the data it provides. In addition to the numeric and bar graph display and events lists, we have added a screen that displays detailed channel information, such as Direct Vibration, 1X Vibration Amplitude and Phase, 2X Vibration Amplitude and Phase, Not 1X Vibration and Gap. Temperature, Process Variable and other proportional inputs can also be displayed.

Red and green LEDs indicate system status: channel OK and alarm status, new alarm event (since last Alarm Acknowledge), overall rack status, and Display Unit status. Eight sets of three LEDs indicate whether the channel displayed on the screen above the LEDs is OK, in Alert or in Danger.





All data, data formats, and status LEDs comply with API 670, Third Edition, November 1993.

Reliable

Like other Bently Nevada Products, the 3500 System Display is ruggedly built for long life and continuous operation. It is designed to work in adverse environmental conditions with a temperature operating range of -20° to 65°C (-4° to 150° F). The System Display is backed by our three-year service plan: any component which fails to meet published specifications will be replaced free of charge.

The goal of the 3500/93 System Display is to provide 3500 Monitoring System users more convenient and immediate access to machinery information and system information in a versatile, user-friendly, and reliable package. This is part of our program to provide better solutions through the 3500 Monitoring System. If you are updating your current system or are installing a new system, consider the 3500 Monitoring System, Bently Nevada Corporation's advanced machinery data management system. For more information, contact your nearest Bently Nevada sales representative.